

NorDx SMHC campuses
Critical Values

CHEMISTRY

Test Name	Critical Value		Comments / Frequency (if not each time)
Acetaminophen		High: > 250 ug/ml	
Bicarbonate	Low: < 10 mEq/L	High: >40 mEq/L	
Bilirubin (< 5 years old)		High: > 15 mg/dL	
Calcium, total (serum)	Low: < 6.0 mg/dL	High: > 13.0 mg/dL	> 15 Absurd Value < 5 Absurd Value
Carbamazepine (Tegretol)		High: > 15 ug/mL	> 40 Absurd Value
Chloride	Low: < 80 mEq/L	High: > 120 mEq/L	
Creatinine		High: > 5 mg/dL	
CRP (Neonatal)		High: > 20.0 mg/L	
Digoxin		High: > 2.5 ng/mL	>10 Absurd Value
Ethanol		High: > 400 mg/dL	
Gentamicin (Peak)		Peak: > 20.0 ug/mL	
Gentamicin (Trough)	Trough: > 2.0 ug/ml		
Glucose/Serum	Low: < 40 mg/dL (adult) Low: < 50 mg/dL (newborn)	High: > 500 mg/dL (adult) High: > 200 mg/dL (newborn)	> 1200 Absurd Value > 400 Absurd Value
Glucose/CSF	Low: <40 mg/dL	High: > 200 mg/dL	
Lactate/Blood		High: > 4.0 mmol/L	No repeat calls for critical values within same day
Lithium		High: ≥ 1.5 mEq/L (0-64) High: ≥ 1.3 mEq/L (≥65)	> 8.0 Absurd Value
Magnesium (serum)	Low: < 1.0 mg/dL	High: > 4.9 mg/dL	
Osmolality	Low: < 250 mosm/kg	High: > 320 mosm/kg	
Phenobarbitol		High: > 60 ug/mL	> 120 Absurd Value
Phenytoin (Dilantin)		High: > 40 ug/mL	> 80 Absurd Value
Phosphate (serum)	Low: < 1.0 mg/dL	High: > 8.9 mg/dL	
Potassium (serum)	Low: ≤ 2.8 mEq/L	High: > 6.0 mEq/L	> 10 Absurd Value < 1 Absurd Value
Potassium (plasma)	Low: ≤ 2.8 mEq/L (all ages)	High: > 7.0 mEq/L (0 day - 1 month) High: > 6.0 mEq/L (1 month- adult)	> 10 Absurd Value < 1 Absurd Value
Salicylate		High: > 400 mg/L	
Sodium	Low: < 120 mEq/L	High: > 160 mEq/L	< 110 Absurd Value > 175 Absurd Value
Theophylline		High: > 20 ug/mL	> 80 Absurd Value
Tobramycin (Peak)		Peak: > 20.0 ug/mL	
Tobramycin (Trough)	Trough: > 2.0 ug/mL		
Troponin T		High: ≥ 0.03 ng/mL	No repeat calls for critical values within same day.
Valproic acid (Depakote)		High: > 200 ug/mL	> 300 Absurd Value
Vancomycin (Trough)	Trough: > 30.00 ug/mL		
BUN (outpatients only)		High: > 70 mg/dL	Courtesy Call
Uric Acid		High: > 13.0 mg/dL	Courtesy Call

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BLOOD GASES

Test Name	Critical Value		Comments / Frequency (if not each time)
COHb		High: >15%	Call ≥ 5.0 % to the Maine CDC
pCO ₂	Low: <30	High: >50	Arterial only
pH	Low: <7.25	High: >7.55	
pO ₂	Low: <50		Arterial only
tHb	Low: ≤ 7.0		
MetHg		High: >5.0	

BLOOD BANK

Test Name	Critical Value	Comments / Frequency (if not each time)
Antibody screen/crossmatch	Positive antibody screen if pregnant (and not due to RhoGam) or incompatible crossmatch following emergency release of blood or urgent request for crossmatched blood. Incompatible blood transfusion.	
Direct anti-globulin test (in neonate)	Positive	
Hemolysis following transfusion	Hemolytic transfusion reaction	

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HEMATOLOGY/COAGULATION/SEROLOGY

Test Name	Critical Value		Comments / Frequency (if not each time)
Absolute Neutrophil	0.0		
CBC, Diff, Smear Review	Presence of more than rare blasts in blood or body fluid on initial review		Pathologist will call new results after smear review. No repeat calls for critical values within 3 months unless prior result was normal and new result is critical. Greater than 20% blasts called to the pathologist at any time.
CBC, Diff, Smear Review	Sickle cells, RBC and WBC parasites		Initial Detection
CSF White blood cells	> 20 wbc		If less than 200 rbc present.
White blood cell count	Low: ≤ 2.0 K/uL	High: ≥ 30.0 (all ages)	
Hemoglobin/Hematocrit	Low: ≤ 7/21 (adult) Low: ≤ 12/36 (0 day - 1 month)		
Schistocytes	3+		
Platelet count	Low: ≤ 40,000	High: ≥ 800,000	New Value (or if the value falls below 10,000) No repeat calls for critical values between 10,000 and 40,000 within 7 days unless prior result was normal and new result is critical.
Fibrinogen	Low: < 100 mg/dL	N/A	
INR		High: ≥ 5.0	
Partial thromboplastin time		High: ≥ 60 secs (outpatients) High: ≥ 150 secs (inpatients)	
Heparin-Induced Thrombocytopenia	Positive		
HIV Serum	Positive		Call ordering physician or Workwell Nurse who ordered the test. Courtesy Call
VDRL	Positive		Call during the day. Courtesy Call.

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MICROBIOLOGY

Test Name	Critical Value	Comments / Frequency (if not each time)
Gram stain - Blood, CSF, sterile body fluid	Positive	
Culture – Blood, CSF, body fluids	Positive	Only the initial positive culture in a set needs to be called. For subsequent positive blood cultures in the same set, the tech should verify that the initial was called and document that a previous positive in the same set was called.
Bacterial antigens (CSF)	Positive	
Cryptococcal antigen	Positive	
Acid fast stain/culture (any source)	Positive	
All other diseases reportable to the state department of health	<i>Salmonella, Shigella, Campylobacter, E.coli 0157, toxin producing E. Coli, Vibrio</i>	Courtesy Call
Isolation of antibiotic resistant organisms	Methicillin resistant <i>Staph aureus</i> (MRSA), Vancomycin resistant <i>Enterococcus</i> (VRE), Extended spectrum beta-lactamase <i>Enterobacteriaceae</i> (ESBL), Carbapenem-resisitant <i>Enterobacteriaceae</i> (CRE)	Courtesy Call
Chlamydia	Positive	Courtesy Call
RSV antigen	Positive	Courtesy Call
C. difficile antigen and/or Toxin A	Positive	Courtesy Call
All other bacterial antigens	Positive	Courtesy Call

Date	Reason for Change	Comment
10/18/2013	Standardize critical value lists for SMMC & GH	Made CV chart separate from CV Policy
1/8/2014	Eliminated HIV WB	Not performed
1/8/2014	Eliminated Malaria	Included in CBC, Diff, Smear Review
9/10/2014	Eliminated CSF WBC cell count >20	Not called at MMC
9/10/2014	Changed to Troponin T	New methodology
1/26/2015	Standardized to MMC reporting limits for Hematology & Coag.	
3/12/2015	Changed Troponin critical value to match Sanford	
4/16/2015	Added Absolute Neutrophil, CSF WBC	
5/26/2015	Changed Blood Gas Hgb to match Hematology	
6/24/2015	Added pediatric plasma potassium values	
7/23/2015	Removed CKMB Index as a Courtesy Call	
1/29/2016	pO2 range change	

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7/13/2016	New lithium critical values and age ranges & Micro courtesy calls
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